

EBIO 327: Biological Diversity Lab

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Overview

This is a one-credit laboratory course focused on recognizing, quantifying, and analyzing biological diversity. During this course, students will work in groups to design, execute, and communicate the results of a systematic survey of particular taxonomic groups in the Big Thicket region of east Texas. The course includes a required, multiple day field trip.

Course Learning Goals

By the end of the course, you will be expected to know:

- What biological diversity is** including the basic scales and hierarchical levels of biodiversity;
- Why biodiversity is important** including why it is important to you;
- How biodiversity is measured** including the strengths and weaknesses of associated field sampling strategies and diversity indices; and
- The main threats to biodiversity** globally and locally;

By the end of the course, you will be expected to be able to:

- Locate peer-reviewed research articles** and extract meaningful information;
- Design and conduct a biological species inventory** focused on a particular taxonomic group;
- Identify local species** within a particular taxonomic group;
- Quantify the diversity of sampled habitats and communities** via species accumulation and rank abundance curves, and the calculation of diversity indices;
- Create scientific reports** that are consistent with published peer-reviewed journal articles in terms of their format, terminology, grammar, tables, figures, and citations; and
- Deliver effective oral presentations** communicating the results of a scientific study.

Course Website

Readings, assignments and announcements will be posted on the course's Owl-Space site:
<https://owlspace-ccm.rice.edu/portal/site/EBIO-327-001-F14>

Disabilities

Any student with a disability requiring accommodations in this class is encouraged to speak with me within the first two weeks of class and also contact the Director of Disabled Student Services in the Ley Student Center.

Honor Code

Collaboration with classmates is encouraged in this class. However, any use of outside resources (including published and unpublished research, websites, or personal communication) should be clearly cited on all reports. Any questions about a potential violation of the Rice University Honor Code should be brought to my attention immediately.

Course schedule (subject to change)

The class meets in the EEB Teaching Lab (ABL 125) on Wednesday afternoons (see below). On fieldtrip days (9/3, 10/1) we will meet in ABL 125 at noon. We will have one multi-day, overnight fieldtrip, leaving campus at 5 pm on 10/24 and returning by 5 pm on 10/26. **The overnight fieldtrip is a required part of the course.** Details regarding the fieldtrips will be discussed during the meeting on 8/27.

Date	Activity
27-Aug	Organizational meeting (mandatory)
3-Sep	Fieldtrip to Chinatown (leave at noon; return by 5 pm)
10-Sep	Lecture/discussion - Analyzing biodiversity data
17-Sep	Lecture/discussion – Introduction to the Big Thicket; Report 1 due
24-Sep	Open lab
1-Oct	Fieldtrip to the Big Thicket NP (leave at noon; return by 10 pm)
8-Oct	Student presentations – Sampling proposals due (written and oral)
15-Oct	Open lab
22-Oct	Fieldtrip preparations
24-26 Oct	Multi-day fieldtrip to the Big Thicket NP (leave 5 pm Fri – return 5 pm Sun)
29-Oct	Open lab
5-Nov	Open lab
12-Nov	Open lab
19-Nov	Open lab; iNaturalist observations due
26-Nov	No class; final written reports due
3-Dec	Student presentations; final oral reports due

Grading

Grades will be calculated out of a total of 1000 points (see breakdown below). **Late assignments will be penalized by 10% of the original point value per 24 hours late.**

Assignment	Points	% of final grade
Report 1	100	10%
Sampling proposal (written)	100	10%
Sampling proposal (presentation)	100	10%
iNaturalist observations	100	10%
Final report (written)	300	30%
Final report (presentation)	200	20%
Participation	100	10%
Total	1000	100%